

Accordingly, the arguments presented in the pre-appeal request for review remain equally applicable. For sake of completeness, these arguments are repeated here:

There would have been no motivation to combine the admitted prior art with Izu, Komino and Yamazaki in the manner set forth in the rejection.

Claim 1, for example, is directed to a plasma CVD apparatus that includes a vacuum chamber; an exhaust means for exhausting gas from the vacuum chamber to an outside; an electrode for supplying electric energy inside the vacuum chamber; and a support that supports a substrate opposing the electrode as the substrate is moved in a first direction through the chamber. The apparatus also includes an introducing port for gas that is located between the electrode and the substrate such that gas is introduced into the chamber in a direction parallel with the first direction so that a flow of gas is rectified in a direction away from a film formation surface of the substrate. Claim 1 further recites that openings are located on a surface of the electrode opposing the substrate, and that the gas is exhausted from the openings to the outside of the vacuum chamber.

While the rejection once again states that Fig. 3 of the admitted prior art shows the introduction of gas in a direction parallel to the first direction, this ignores the recitation in both claims 1 and 10 that the gas is introduced “in a direction parallel to the first direction so that a flow of gas is rectified in a direction away from a film formation surface of the substrate.” As has been noted previously, the admitted prior art states that, when the gas is passed along the surface of the substrate, gas flows toward the surface of the substrate due to turbulence (see page 5, lines 1-5). Thus, the admitted prior art does not show the recited gas supply arranged such that gas is introduced in a direction parallel to the direction that the substrate the flow of gas is rectified away from a film formation surface of the substrate.

Izu shows manifolds 52 that introduce gas in a direction perpendicular to a direction in which the substrate moves, and an exhaust port 56 that exhausts the gas through openings in an

electrode 58. Thus, Izu, like the admitted prior art, does not describe or suggest introducing the gas in a direction parallel to a direction in which the substrate moves.

a. The rejection does not provide sufficient motivation for combining Izu and the admitted prior art.

The rejection notes that the motivation to combine the admitted prior art with Izu would have resulted from a desire to have the resulting structure allow for a “uniform distribution of the gas across the entire substrate” and to “maintain a uniform flow of the gas.” However, neither Izu nor the admitted prior art indicates that such benefits would result from introducing gas in a parallel direction or exhausting gas from openings in the electrodes, and accordingly, the desire for such benefits cannot be used as a motivation to combine the references to produce a system including those features. (While Izu mentions a desire for uniform gas flow at col. 5, lines 17-20, Izu also states that this desire is met by including a large number of feed apertures.) Accordingly, the rejections should be withdrawn for at least this reason.

b. The rejection ignores the failure of both Izu and the admitted prior art to describe or suggest parallel introduction in the manner recited in the claims.

In response to applicant's prior arguments that none of the cited prior art describes or suggests introducing the gas into the chamber “in a direction parallel with said first direction so that a flow of said gas is rectified in a direction away from a film formation surface of the substrate,” the Examiner asserts that the applicant has merely recognized another advantage which would flow naturally from following the suggestion of the prior art, and that this cannot be the basis for patentability when the differences would otherwise be obvious. Applicant respectfully disagrees with this conclusion, as there is no suggestion in the prior art to introduce the gas in a direction parallel with the first direction **and** so that a flow of gas is rectified in a direction away from a film formation surface of the substrate. As has been noted, this feature is advantageous in that the fine particles and fragmented particles are not deposited onto the film formation surface. Izu describes a system in which gas is introduced in a direction normal to the

first direction. The admitted prior art describes as problematic a system in which the gas is introduced in a direction parallel to the first direction. As such, nothing in the admitted prior art or Izu would have led one of ordinary skill in the art to modify Izu's approach to adopt parallel gas introduction, let alone to rectify a flow of gas in a direction away from the film formation surface. Accordingly, the rejections should be withdrawn for at least this reason.

c. Izu is directed to different type of system than that of the admitted prior art and the other references and, as such, would not be readily combined with those references.

Izu is directed to a multi-chamber system. In the "Background of the Invention," Izu criticizes single chamber systems, noting that using a single chamber results in undesirable restrictions in "the optimization and manufacturing speed of the finished structure device." Izu further notes that performing the production of multilayer devices including adjacent layers of differing material types in a single chamber requires complex control apparatus and time consuming techniques, as well as added intermediate evacuation steps to avoid cross contamination. Izu, in the "Summary of the Invention," then goes on to describe the advantages of using multiple chambers.

By contrast, each of the admitted prior art, Komino and Yamazaki involves using a single chamber to perform multiple process steps that are performed in multiple chambers of Izu. Accordingly, since Izu is directed to a type of process that differs from that of the admitted prior art, Komino and Yamazaki, there would have been no motivation to combine the references in the manner set forth in the rejection. Accordingly, the rejections should be withdrawn for at least this reason.

Rejections based on the admitted prior art, Sando, Komino and Yamazaki

In general, the arguments presented above with respect to Izu are largely applicable to Sando, which is directed to an apparatus for treating textiles. In particular, like Izu, Sando (a) provides no motivation to modify the system of the admitted prior art in the manner set forth in the rejection, (b) does not describe or suggest parallel introduction in the manner recited in the

claims, and (c) is directed to a different type of system than that of the admitted prior art and the other references and, as such, would not be readily combined with those references.

As to point (a), there simply is nothing in Sando that would have led one of ordinary skill in the art to modify the system of the admitted prior art. (Nor does the rejection identify any such motivation in Sando.)

As to point (b), Sando describes introducing a gas through a gas nozzle located on one side of a cloth to be treated in a direction perpendicular to a direction in which the cloth moves, and removing the gas through a gas exhaust duct located on the opposite side of the cloth to be treated.

As to point (c), Sando is directed to an apparatus for treating textiles, and is entirely unrelated to a plasma CVD apparatus such as is shown in the admitted prior art.

In addition, while the rejection asserts that Sando describes a mesh-like exhaust port 58, this does not appear to be the case. In particular, applicant was unable to find any reference in Sando to such a mesh-like exhaust port or to a reference label 58. (Applicant notes that the use of reference label 58 appears to be intended to refer to the electrode 58 of Izu.)

Accordingly, for at least these reasons, the rejections should be withdrawn.

Applicant submits that all claims are in condition for allowance.

Applicant : Masato Yonezawa et al.
Serial No. : 09/820,520
Filed : March 28, 2001
Page : 6 of 6

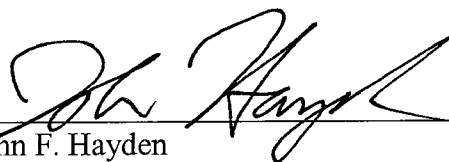
Attorney's Docket No.: 07977-270001 / US4820

The fee in the amount of \$450 in payment of the two-month extension fee is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: _____

8/2/06



John F. Hayden
Reg. No. 37,640

Customer No. 26171

Fish & Richardson P.C.
1425 K Street, N.W. - 11th Floor
Washington, DC 20005-3500
Telephone: (202) 783-5070
Facsimile: (202) 783-2331
40347502.doc